

WHAT IS CLAIMED IS:

1. A method for transmission of a stream of data between two communications devices of a transmission system, the data being segmented into packets prior to transmission thereof, each of the packets comprising a header of a given size and a payload, the method comprising the steps of:

(a) at a first of the two communications devices, reducing the given size of a selected number of said headers prior to said transmission of packets by eliminating a predetermined data element therefrom to thereby respectively form reduced headers;

(b) transmitting each of said reduced headers from said first of the two communications devices to a second of the two communications devices; and

(c) at said second of the two communications devices, restoring the given size of the selected number of said headers when each of said reduced headers so transmitted has been received by said second of the two communications devices by reconstituting each said predetermined data element.

2. The method of transmission according to Claim 2, wherein each predetermined data element is ordinarily unutilized by the transmission system over a course of the transmission of packets from said first of the two communications devices to said second of the two communications devices.

3. The method of transmission according to Claim 3, wherein the reconstituting of each said predetermined data element is accomplished by the insertion into the reduced header of a bit having a value of zero.

4. The method of transmission according to Claim 3, wherein error verification of the transmitted packets is conducted only in relation to bits forming part of the reduced header.

5. The method of transmission according to Claim 4, wherein the error verification is accomplished by encoding the reduced header with a header error check field.

6. The method of transmission according to Claim 5, wherein the error verification is computed by way of a Hamming code.

7. The method of transmission according to Claim 6, wherein the selected number of headers constitutes all of the headers transmitted from said first of the two communications devices.

8. The method of transmission according to Claim 6, wherein the packets are cells of a fixed length.

9. The method of transmission according to Claim 8, wherein the cells are Asynchronous Transfer Mode (ATM) cells.

10. The method of transmission according to Claim 9, wherein a plurality of said predetermined data elements is eliminated and the headers, prior to said eliminating of predetermined data elements therefrom, each comprises two multiplexing identifiers in the form of a complete Virtual Path Identifier (VPI) encoded on 8 bits and a complete Virtual Channel Identifier (VCI) encoded on 16 bits, and wherein the headers, after said eliminating of a predetermined data element therefrom, each comprises a reduced Virtual Path Identifier (VPI) encoded on 4 bits corresponding to 4 least significant bits of the complete Virtual Path Identifier (VPI) and each further comprises a Virtual Channel Identifier (VCI) encoded on 8 bits corresponding to 8 least significant bits of the complete Virtual Channel Identifier (VCI), and wherein the reconstituting of each predetermined data element includes adding respectively 4 and 8 bits each having a value of zero to the reduced Virtual Path Identifier (VPI) and to the reduced Virtual Connection Identifier (VCI).

11. The method of transmission according to Claim 10, wherein the headers, prior to said eliminating of predetermined data elements therefrom, each comprises a 4-bit Generic Flow Control (GFC) field, the Generic Flow Control (GFC) field being eliminated to form said

reduced headers, and wherein the reconstituting of each predetermined data element includes adding 4 bits each having a value of zero to the reduced header.

12. The method of transmission according to Claim 11, wherein the header error check field of each header prior to said eliminating of predetermined data elements therefrom and of each reduced header is a Header Error Check (HEC) field according to the Asynchronous Transfer Mode (ATM) protocol and is encoded on 8 bits.

13. The method of transmission according to Claim 11, wherein the header error check field of each header prior to said eliminating of predetermined data elements therefrom and of each reduced header is a Header Error Check (HEC) field according to the Asynchronous Transfer Mode (ATM) protocol and in the case of the reduced headers is encoded on fewer than 8 bits.

14. The method of transmission according to Claim 13, wherein the Header Error Check (HEC) field of the reduced headers is encoded on 5 bits.

15. The method of transmission according to Claim 14, wherein the selected number of headers to which the step of reducing is applied is determined on instructions received by the first of the two communications devices.

16. The method of transmission according to Claim 14, wherein the predetermined data elements are identified for elimination on instructions received by the first of the two communications devices.

17. The method of transmission according to Claim 15, wherein the said instructions are furnished by the second of the two communications devices.

18. The method of transmission according to Claim 16, wherein the said instructions are furnished by the second of the two communications devices.

19. The method of transmission according to Claim 15, wherein the said instructions are furnished by a network management device.

20. The method of transmission according to Claim 16, wherein the said instructions are furnished by a network management device.

21. In a signal representing a stream of data for transmission between two communications devices of a transmission system, the data being segmented into packets prior to transmission thereof, each of the packets comprising an originating header of a given size and a payload, the improvement characterized by a selected number of the packets comprising a transmission header of a reduced size when compared to the given size of the originating header, the reduced size being obtained by eliminating a predetermined data element from the originating header prior to transmission of the packets, and wherein the given size is restored to the transmission header by reconstituting each said predetermined data element following transmission of the packets.

22. The improvement according to Claim 21, wherein each predetermined data element is ordinarily unutilized over a course of the transmission of the selected number of the packets.

23. An apparatus for transmission of a stream of data to a communications device of a transmission system, the data being segmented into packets prior to transmission thereof, each of the packets comprising a header of a given size and a payload, the apparatus comprising a processor which reduces the given size of a selected number of said headers prior to said transmission of packets by eliminating a predetermined data element therefrom to thereby respectively form reduced headers, and wherein the given size is restored to the reduced headers when same are received by the communications device by reconstituting each said data element.

24. An apparatus for reception of a stream of data transmitted by a communications device of a transmission system, the data being segmented into packets prior to transmission thereof, each of the packets comprising a header of a given size and a payload, the given size of a selected

number of said headers having been reduced by the communications device prior to said transmission of packets by eliminating a predetermined data element therefrom to thereby form reduced headers, the apparatus comprising a processor which restores the given size of the selected number of said headers when each of said reduced headers so transmitted has been received by the apparatus by reconstituting each said predetermined data element.